

SEQUENCE LISTING

<110> Satoshi KOIZUMI
 Kazuhiko TABATA
 5 Tetsuo ENDO
 Akio OZAKI

<120> Process for producing N-acetylneuraminic acid

10 <130> 11229

<150> H11-242670

<151> 1999-08-30

15 <160> 8 ✓

<170> PatentIn Ver. 2.0

<210> 1

20 <211> 391

<212> PRT

<213> Synechocystis sp. (PCC6803)

<400> 1

25 Met Ile Ala His Arg Arg Gln Glu Leu Ala Gln Gln Tyr Tyr Gln Ala
 1 5 10 15

Leu His Gln Asp Val Leu Pro Phe Trp Glu Lys Tyr Ser Leu Asp Arg
 20 25 30

30

Gln Gly Gly Gly Tyr Phe Thr Cys Leu Asp Arg Lys Gly Gln Val Phe
 35 40 45

Asp Thr Asp Lys Phe Ile Trp Leu Gln Asn Arg Gln Val Trp Gln Phe
 35 50 55 60

Gly Asp Arg Gln Leu Gln Glu Gln Ala Ile Ala Val Val Leu Asn Thr
 260 265 270

5 Leu Glu Tyr Ala Trp Asp Glu Glu Phe Gly Gly Ile Phe Tyr Phe Leu
 275 280 285

Asp Arg Gln Gly His Pro Pro Gln Gln Leu Glu Trp Asp Gln Lys Leu
 290 295 300

10 Trp Trp Val His Leu Glu Thr Leu Val Ala Leu Ala Lys Gly His Gln
 305 310 315 320

Ala Thr Gly Gln Glu Lys Cys Trp Gln Trp Phe Glu Arg Val His Asp
 325 330 335

15 Tyr Ala Trp Ser His Phe Ala Asp Pro Glu Tyr Gly Glu Trp Phe Gly
 340 345 350

Tyr Leu Asn Arg Arg Gly Glu Val Leu Leu Asn Leu Lys Gly Gly Lys
 20 355 360 365

Trp Lys Gly Cys Phe His Val Pro Arg Ala Leu Trp Leu Cys Ala Glu
 370 375 380

25 Thr Leu Gln Leu Pro Val Ser
 385 390

30 <210> 2
 <211> 1173
 <212> DNA
 <213> Synechocystis sp. (PCC6803)

<400> 2

35 atg att gcc cat cgc cgt cag gag tta gcc cag caa tat tac cag gct 48
 Met Ile Ala His Arg Arg Gln Glu Leu Ala Gln Gln Tyr Tyr Gln Ala

[illegible]

	145		150		155		160		
	gag aag tcc tat cca ggt act aga ccc ctc aaa tcc ctg gcg gtg ccg							528	
	Glu Lys Ser Tyr Pro Gly Thr Arg Pro Leu Lys Ser Leu Ala Val Pro								
5		165			170		175		
	atg att tta gcc aac ctc acc ctg gag atg gaa tgg tta tta ccg cct							576	
	Met Ile Leu Ala Asn Leu Thr Leu Glu Met Glu Trp Leu Leu Pro Pro								
		180			185		190		
10									
	act acc gtg gaa gag gtg ttg gcc caa acc gtc aga gaa gtg atg acg							624	
	Thr Thr Val Glu Glu Val Leu Ala Gln Thr Val Arg Glu Val Met Thr								
		195			200		205		
15									
	gat ttc ctc gac cca gaa ata gga tta atg cgg gaa gcg gtg acc ccc							672	
	Asp Phe Leu Asp Pro Glu Ile Gly Leu Met Arg Glu Ala Val Thr Pro								
		210			215		220		
	aca gga gaa ttt gtt gat agt ttt gaa ggg cgg ttg ctc aac cca gga							720	
20	Thr Gly Glu Phe Val Asp Ser Phe Glu Gly Arg Leu Leu Asn Pro Gly								
		225			230		235		240
	cac ggc att gaa gcc atg tgg ttc atg atg gac att gcc caa cgc tcc							768	
	His Gly Ile Glu Ala Met Trp Phe Met Met Asp Ile Ala Gln Arg Ser								
25		245			250		255		
	ggc gat cgc cag tta cag gag caa gcc att gca gtg gtg ttg aac acc							816	
	Gly Asp Arg Gln Leu Gln Glu Gln Ala Ile Ala Val Val Leu Asn Thr								
		260			265		270		
30									
	ctg gaa tat gcc tgg gat gaa gaa ttt ggt ggc ata ttt tat ttc ctt							864	
	Leu Glu Tyr Ala Trp Asp Glu Glu Phe Gly Gly Ile Phe Tyr Phe Leu								
		275			280		285		
35									
	gat cgc cag ggc cac cct ccc caa caa ctg gaa tgg gac caa aag ctc							912	
	Asp Arg Gln Gly His Pro Pro Gln Gln Leu Glu Trp Asp Gln Lys Leu								

	290	295	300	
	tgg tgg gta cat ttg gaa acc ctg gtt gcc cta gcc aag ggc cac caa			960
	Trp Trp Val His Leu Glu Thr Leu Val Ala Leu Ala Lys Gly His Gln			
5	305	310	315	320
	gcc act ggc caa gaa aaa tgt tgg caa tgg ttt gag cgg gtc cat gat			1008
	Ala Thr Gly Gln Glu Lys Cys Trp Gln Trp Phe Glu Arg Val His Asp			
		325	330	335
10				
	tac gcc tgg agt cat ttc gcc gat cct gag tat ggg gaa tgg ttt ggc			1056
	Tyr Ala Trp Ser His Phe Ala Asp Pro Glu Tyr Gly Glu Trp Phe Gly			
		340	345	350
15				
	tac ctg aat cgc cgg gga gag gtg tta ctc aac cta aaa ggg ggg aaa			1104
	Tyr Leu Asn Arg Arg Gly Glu Val Leu Leu Asn Leu Lys Gly Gly Lys			
		355	360	365
	tgg aaa ggg tgc ttc cac gtg ccc cga gct ctg tgg ctc tgt gcg gaa			1152
20	Trp Lys Gly Cys Phe His Val Pro Arg Ala Leu Trp Leu Cys Ala Glu			
		370	375	380
	act ctc caa ctt ccg gtt agt			1173
	Thr Leu Gln Leu Pro Val Ser			
25	385	390		
	<210> 3			
	<211> 24			
30	<212> DNA			
	<213> Artificial Sequence			
	<220>			
	<223> Synthetic DNA			
35				
	<400> 3			

005280.12254950

gtglaagctt tctgtatggg gtgt
24

5 <210> 4
<211> 26
<212> DNA
<213> Artificial Sequence

10 <220>
<223> Synthetic DNA

<400> 4
gcagggatcc caaccaggca gcggaa
15 26

<210> 5
<211> 32
20 <212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic DNA

25
<400> 5
tttatcgata ttaattaggg ggaatgaatg ag
32

30
<210> 6
<211> 33
<212> DNA
<213> Artificial Sequence

35
<220>

005220 1264950

<223> Synthetic DNA

<400> 6

tttggatcct cattattccc cctgattttt gaa

5 33

<210> 7

<211> 36

10 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic DNA

15

<400> 7

taaatcgata ttgtatgat tgcccatcgc cgtcag

36

20 <210> 8

<211> 36

<212> DNA

<213> Artificial Sequence

25 <220>

<223> Synthetic DNA

<400> 8

aaaggatcct taactaaccg gaagtggag agtttc

36